



September 30, 2013

Mr. Mark Nations
The Doe Run Company
P.O. Box 1633
Desloge, Missouri 63601

Re: Ambient Air Monitoring Report – Federal Site

Dear Mr. Nations:

Please find attached the Second Quarter 2013 "*Ambient Air Monitoring Report*" for The Doe Run Company at the Federal Site, located near Park Hills, Missouri.

Sites included in this report are Big River #4, Big River #4 QA, Site #1 at the Water Treatment Plant, and Site #4 at St. Joe Park. Federal Site #1 at the Water Treatment Plant is the same monitoring site as National #3 East – WTP, as listed in the Lab Results section of this report. Monitoring at Site #4 began on January 23, 2013 for lead and TSP and on January 25, 2013 for PM₁₀.

This report will include the following:

- **Glossary of Terms** – Listing of the abbreviations used for each parameter and unit.
- **National Ambient Air Quality Standards** – Lists the maximum allowable concentrations for the measured parameters.
- **Quarterly Missing Data Summary** – Listing of missing particulate run days.
- **Quarterly Data Summary** – Includes the averages of each monitored parameter, which relates to the federal standard.

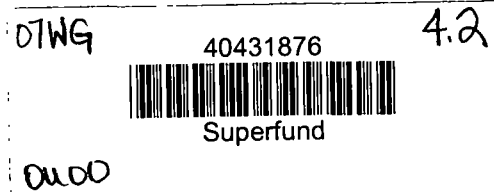
Barr Engineering Company offers this report as an independent laboratory. This includes the weighing of filters, obtaining lead and cadmium analysis, compiling the data, and preparing the report. No interpretation of the data or analysis of the results is implied or intended. Should you have any questions regarding this report, please call.

Respectfully,

A handwritten signature in cursive script, appearing to read "Richard J. Campbell".

Richard J. Campbell, PE
Chemical Engineer
Senior Environmental Consultant

c: Mr. Bob Hinkson
Mr. Jason Gunter
Mr. Ty Morris



Ambient Air Monitoring Report

***Federal Mine Tailings Site
Park Hills, Missouri***

The Doe Run Company

Second Quarter 2013



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SUPERFUND DIVISION

Ambient Air Monitoring Report

***Federal Mine Tailings Site
Park Hills, Missouri***

The Doe Run Company

Second Quarter 2013



1001 Diamond Ridge Suite 1100
Jefferson City, MO 65109
Phone: (573) 638-5000
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GLOSSARY OF TERMS

$\mu\text{g}/\text{m}^3$	Micrograms per Cubic Meter
TSP	Total Suspended Particulate
PM ₁₀	Particulate Matter - 10 Microns or Less
mmHg	Millimeters of Mercury

NATIONAL AMBIENT AIR QUALITY STANDARDS (NAAQS)

PM ₁₀ – Particulate Matter	24-Hour*	Annual Maximum	150 $\mu\text{g}/\text{m}^3$
Lead	Calendar Quarter	Arithmetic Mean	1.5 $\mu\text{g}/\text{m}^3$

TSP (Total Suspended Particulate) – There are no Federal Standards that apply solely for TSP.

*This standard must be exceeded more than once a year to constitute a violation.

QUARTERLY MISSING DATA SUMMARY

TSP/Lead Summary

Federal Site #4 St. Joe Park - 4/10/2013 - INVALID - Mechanical Failure
Federal Site #4 St. Joe Park - 4/29/2013 - INVALID - Short Run; Less Than 23 Hours
Federal Site #4 St. Joe Park - 5/21/2013 - INVALID - Mechanical Failure
All Sites – 5/27/2013 – Holiday – No samples scheduled
All Sites – 6/6/2013 – Training – No samples scheduled

PM₁₀ Summary

All Sites – 5/28/2013 – Holiday – No samples scheduled

Particulate and Lead Quarterly Summary



TSP and Lead Concentration Summary

Federal Park Hills, Missouri

2013

Date	TSP #1 - Water Plant ($\mu\text{g}/\text{m}^3$)	TSP #2 - Big River #4 ($\mu\text{g}/\text{m}^3$)	TSP #4 - St. Joe Park ($\mu\text{g}/\text{m}^3$)	LEAD #1 - Water Plant ($\mu\text{g}/\text{m}^3$)	LEAD #2 - Big River #4 ($\mu\text{g}/\text{m}^3$)	LEAD #4 - St. Joe Park ($\mu\text{g}/\text{m}^3$)
4/1/13	17	22	20	0.010	0.019	0.015
4/2/13	24	37	23	0.086	0.036	0.023
4/3/13	34	39	33	0.017	0.018	0.019
4/4/13	33	40	35	0.022	0.034	0.021
4/5/13	50	57	63	0.021	0.041	0.034
4/8/13	44	40	86	0.009	0.012	0.153
4/9/13	47	44	95	0.010	0.010	0.167
4/10/13	15	13	INVALID	0.014	0.008	INVALID
4/11/13	6	4	7	0.022	0.009	0.022
4/12/13	10	14	16	0.024	0.018	0.023
4/15/13	34	32	79	0.017	0.012	0.497
4/16/13	18	22	15	0.006	0.008	0.022
4/17/13	54	39	122	0.037	0.016	0.249
4/18/13	7	7	6	0.000	0.000	0.008
4/19/13	17	13	12	0.061	0.006	0.022
4/22/13	37	44	50	0.016	0.027	0.095
4/23/13	11	11	14	0.008	0.006	0.009
4/24/13	13	15	14	0.012	0.012	0.006
4/25/13	35	35	32	0.015	0.014	0.021
4/26/13	7	6	10	0.000	0.000	0.000
4/29/13	52	51	INVALID	0.000	0.013	INVALID
4/30/13	48	53	45	0.016	0.013	0.027
Monthly Average	28	29	39	0.019	0.015	0.072

QUARTERLY LEAD NAAQS LIMIT: $1.5 \mu\text{g}/\text{m}^3$

Please see the particulate analysis sheets for explanations of missing or invalid data.

Note 1: A summary of the Big River #4 sampler data is also included, because it was part of the QA plan.

Note 2: A summary of the National #3 East - WTP sampler data is included because it is the same sampling site as Federal #1 Water Plant.

Note 3: Sampling for Federal at #4 St. Joe Park began on January 25, 2013.



TSP and Lead Concentration Summary

Federal
Park Hills, Missouri

2013

Date	TSP #1 - Water Plant ($\mu\text{g}/\text{m}^3$)	TSP #2 - Big River #4 ($\mu\text{g}/\text{m}^3$)	TSP #4 - St. Joe Park ($\mu\text{g}/\text{m}^3$)	LEAD #1 - Water Plant ($\mu\text{g}/\text{m}^3$)	LEAD #2 - Big River #4 ($\mu\text{g}/\text{m}^3$)	LEAD #4 - St. Joe Park ($\mu\text{g}/\text{m}^3$)
5/1/13	40	44	38	0.015	0.017	0.011
5/2/13	17	27	24	0.009	0.018	0.021
5/3/13	1	2	2	0.000	0.000	0.000
5/6/13	23	22	25	0.018	0.015	0.024
5/7/13	26	24	23	0.049	0.018	0.009
5/8/13	35	41	39	0.044	0.022	0.062
5/9/13	35	35	48	0.008	0.010	0.010
5/10/13	19	40	27	0.008	0.046	0.010
5/13/13	44	63	56	0.020	0.039	0.043
5/14/13	50	54	53	0.043	0.024	0.064
5/15/13	43	44	52	0.010	0.028	0.043
5/16/13	21	26	25	0.000	0.010	0.013
5/17/13	22	23	20	0.016	0.016	0.033
5/20/13	28	30	35	0.032	0.081	0.040
5/21/13	18	15	INVALID	0.008	0.010	INVALID
5/22/13	25	34	27	0.037	0.022	0.082
5/23/13	19	23	20	0.027	0.027	0.025
5/24/13	14	30	22	0.008	0.032	0.032
5/28/13	44	47	124	0.006	0.028	0.449
5/29/13	48	40	127	0.033	0.024	0.408
5/30/13	20	18	55	0.012	0.009	0.120
5/31/13	9	10	12	0.000	0.013	0.007
Monthly Average	27	31	41	0.018	0.023	0.072
				QUARTERLY LEAD NAAQS LIMIT: 1.5 $\mu\text{g}/\text{m}^3$		

Please see the particulate analysis sheets for explanations of missing or invalid data.

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TSP and Lead Concentration Summary

Federal
Park Hills, Missouri

2013

Date	TSP #1 - Water Plant ($\mu\text{g}/\text{m}^3$)	TSP #2 - Big River #4 ($\mu\text{g}/\text{m}^3$)	TSP #4 - St. Joe Park ($\mu\text{g}/\text{m}^3$)	LEAD #1 - Water Plant ($\mu\text{g}/\text{m}^3$)	LEAD #2 - Big River #4 ($\mu\text{g}/\text{m}^3$)	LEAD #4 - St. Joe Park ($\mu\text{g}/\text{m}^3$)
6/3/13	15	20	19	0.008	0.008	0.014
6/4/13	22	30	26	0.006	0.020	0.011
6/5/13	25	41	26	0.017	0.041	0.013
6/7/13	22	48	28	0.026	0.069	0.018
6/10/13	12	36	25	0.012	0.050	0.040
6/11/13	22	23	42	0.000	0.008	0.058
6/12/13	50	66	68	0.015	0.046	0.066
6/13/13	19	47	48	0.007	0.061	0.084
6/14/13	30	40	33	0.008	0.022	0.008
6/17/13	17	14	16	0.051	0.006	0.007
6/18/13	23	21	22	0.047	0.015	0.020
6/19/13	26	29	28	0.016	0.026	0.025
6/20/13	32	83	31	0.007	0.147	0.000
6/21/13	36	29	48	0.018	0.015	0.039
6/24/13	28	28	33	0.000	0.000	0.019
6/25/13	37	36	55	0.000	0.000	0.055
6/26/13	51	47	74	0.137	0.014	0.146
6/27/13	29	51	72	0.077	0.061	0.110
6/28/13	35	59	61	0.040	0.095	0.056

Monthly Average	28	39	40	0.026	0.037	0.042
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Quarterly Average	28	33	40	0.021	0.025	0.062
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QUARTERLY LEAD NAAQS LIMIT: $1.5 \mu\text{g}/\text{m}^3$

Please see the particulate analysis sheets for explanations of missing or invalid data.

Note 1: A summary of the Big River #4 sampler data is also included, because it was part of the QA plan.

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Note 3: Sampling for Federal at #4 St. Joe Park began on January 25, 2013.

PM₁₀ Quarterly Summary



Particulate Summary

Federal
Park Hills, Missouri

2013

Date	PM ₁₀ #1 - Water Plant ($\mu\text{g}/\text{m}^3$)	PM ₁₀ #2 - Big River #4 ($\mu\text{g}/\text{m}^3$)	PM ₁₀ #4 - St. Joe Park ($\mu\text{g}/\text{m}^3$)	PM ₁₀ NAAQS ($\mu\text{g}/\text{m}^3$)
1-Apr	10	12	12	150
4-Apr	23	21	24	150
7-Apr	15	16	23	150
10-Apr	12	11	32	150
13-Apr	7	8	7	150
16-Apr	8	11	10	150
19-Apr	5	5	5	150
22-Apr	14	17	19	150
25-Apr	9	11	12	150
28-Apr	6	4	4	150
Monthly Average	11	12	15	

Please see the particulate analysis sheets for explanations of missing or invalid data.

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Note 3: Sampling for Federal at #4 St. Joe Park began on January 25, 2013.



Particulate Summary

Federal Park Hills, Missouri

2013

Date	PM ₁₀ #1 - Water Plant ($\mu\text{g}/\text{m}^3$)	PM ₁₀ #2 - Big River #4 ($\mu\text{g}/\text{m}^3$)	PM ₁₀ #4 - St. Joe Park ($\mu\text{g}/\text{m}^3$)	PM ₁₀ NAAQS ($\mu\text{g}/\text{m}^3$)
1-May	18	21	23	150
4-May	3	3	3	150
7-May	11	12	12	150
10-May	8	11	14	150
13-May	21	28	30	150
16-May	13	17	19	150
19-May	23	25	40	150
22-May	10	11	14	150
25-May	12	15	18	150
31-May	6	4	8	150
Monthly Average	12	15	18	

Please see the particulate analysis sheets for explanations of missing or invalid data.

Note: A summary of the Big River #4 sampler data is also included, because it was part of the QA plan.



Particulate Summary

Federal
Park Hills, Missouri

2013

Date	PM ₁₀ #1 - Water Plant ($\mu\text{g}/\text{m}^3$)	PM ₁₀ #2 - Big River #4 ($\mu\text{g}/\text{m}^3$)	PM ₁₀ #4 - St. Joe Park ($\mu\text{g}/\text{m}^3$)	PM ₁₀ NAAQS ($\mu\text{g}/\text{m}^3$)
3-Jun	14	16	16	150
6-Jun	18	23	21	150
9-Jun	11	10	14	150
12-Jun	28	27	39	150
15-Jun	17	18	26	150
18-Jun	12	9	13	150
21-Jun	21	35	29	150
24-Jun	25	26	34	150
27-Jun	21	18	33	150
30-Jun	13	12	12	150
Monthly Average	18	19	24	
Quarterly Average	14	15	19	

Please see the particulate analysis sheets for explanations of missing or invalid data.

Note: A summary of the Big River #4 sampler data is also included, because it was part of the QA plan.

Quarterly Quality Control



120 East Davis Street
P.O. Box 30
Fayette, MO 65248-0030

Phone: (660) 248-1911
Fax: (660) 248-1921
<http://www.inovatia.com>

ANALYSIS REPORT

Client Information:

Barr Engineering
5150 W. 76th Street
Edina, MN 55439

Project Name: Quarterly QC Samples
Quarter-Year: Q2-2013
Sample Matrix: Filter

Analysis Method: 40 CFR §58 Appendix A/40 CFR §50 Appendix G

Lab Number	Observed Value (µg Pb/Filter)	Actual Value (µg Pb/Filter)	Difference (+/-)	Difference (%)	% Difference Average (%)	Standard Deviation	95% Probability Limit (+)	95% Probability Limit (-)	Analyst-Date
20A	20.141	20	0.141	0.705%					DS-04/16/13
20B	20.416	20	0.416	2.080%					DS-05/31/13
20C	20.390	20	0.39	1.950%	1.578%	0.759%	3.066%	0.090%	DS-06/05/13
60A	61.359	60	1.359	2.265%					DS-04/16/13
60B	59.026	60	-0.974	-1.623%					DS-05/31/13
60C	60.344	60	0.344	0.573%	0.405%	1.950%	4.226%	-3.416%	DS-06/05/13

Submitted by:


Digitally signed by Jennifer Vandelicht
DN: cn=Jennifer Vandelicht,
o=Inovatia Laboratories, LLC,
ou=Quality Assurance,
email=jvandelicht@inovaita.com,
c=US
Date: 2013.06.13 11:51:42 -05'00'

Jennifer Vandelicht
Quality Assurance

06/13/2013
Date

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